

AMENDMENTS TO THE CLAIMS

1. **(Currently Amended)** A method of identifying at least one epitope binding domain capable of binding to a predetermined epitope comprising:
 - (a) displaying on the surface of a biological display system a panel of ~~bivalent or multivalent~~ recombinant polypeptides comprised of (1) an N-terminal blocking domain at the N-terminus of said recombinant polypeptide, (2) a C-terminal anchoring domain at the C-terminus of said recombinant polypeptide, said C-terminal anchoring domain—that mediates anchoring of said recombinant polypeptide to the surface of said display system, and (3) at least one epitope binding domain positioned between said N-terminal blocking domain and said C-terminal anchoring domain; and
 - (b) identifying a subset of said recombinant polypeptides that bind to said predetermined epitope.

2. **(Currently Amended)** The method of claim 1, wherein said N-terminal blocking domain and said epitope binding domain are linked by a polypeptide linker, ~~wherein said polypeptide linker comprises a plurality of hydrophilic amino acids and connects the C-terminal end of said blocking domain and the N-terminal end of said epitope binding domain.~~

3. **(Previously Presented)** The method of claim 1 or 2, wherein said epitope binding domain is a pair of V_H - V_L , V_H - V_H or V_L - V_L domains.

4. **(Currently Amended)** The method of claim 1 wherein said display system is a filamentous phage system ~~produced by bacteria transfected therewith~~, a baculovirus expression system, a ribosome based expression system, a bacteriophage lambda display system or a bacterial surface expression system.

5. **(Currently Amended)** The method of claim 4, further comprising, prior to step (a),

the further step of:

- (a") transfecting bacteria with recombinant vectors encoding said recombinant polypeptides.
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6. **(Currently Amended)** The method of claim 1-5, further comprising, prior to step (a"), the further step of:
(a') cloning a panel of nucleic acid molecules encoding said epitope binding domain into a vector.
 7. **(Original)** The method of claim 6, wherein said panel of nucleic acid molecules is derived from immune competent cells of a mammal, fish or bird.
 8. **(Currently Amended)** The method of claim 1, wherein said N-terminal ~~binding~~blocking domain comprises at least 9 amino acids.
 9. **(Currently Amended)** The method of claim 8, wherein said ~~C-terminal anchoring~~N-terminal blocking domain is or is derived from the N2-domain of the gene III product of filamentous phage.
 10. **(Previously Presented)** The method of claim 1, wherein said C-terminal anchoring domain is or is derived from the C-terminal CT-domain of the gene III product of filamentous phage.
 11. **(Currently Amended)** The method of claim 1, wherein said ~~bi- or multivalent recombinant~~ polypeptide is a bi- or multifunctional polypeptide.
 12. **(Currently Amended)** The method of claim 1, wherein said N-terminal blocking domain comprises an amino acid sequences that forms an effector ~~protein~~ domain having a ~~conformation suitable for a biological activity, capable of sequestering an ion, or~~ capable of selective binding to a solid support.

13. **(Currently Amended)** The method of claim 12 wherein said effector ~~protein-domain~~ is an enzyme, toxin, receptor, binding site, biosynthetic antibody binding site, growth factor, cell-differentiation factor, lymphokine, cytokine or hormone.
14. **(Currently Amended)** The method of claim ~~12-38~~ wherein said sequence capable of sequestering an ion is calmodulin, methallothionein, a fragment thereof, or an amino acid sequence rich in at least one of glutamic acid, aspartic acid, lysine, and arginine.
15. **(Currently Amended)** The method of claim ~~1238~~ wherein said polypeptide sequence capable of selective binding to a solid support is a positively or negatively charged amino acid sequence, a cysteine-containing amino acid sequence, streptavidin, or a fragment of Staphylococcus protein A.
16. **(Currently Amended)** The method of claim 13, wherein said receptor ~~iscomprises~~ a co-stimulatory surface molecule important for T-cell activation, ~~or comprises~~ an epitope binding domainsite or a hormone binding site.
17. **(Original)** The method of claim 16, wherein said co-stimulatory surface molecule is CD80 (B7-1), CD86 (B7-2), CD58 (LFA-3) or CD54 (ICAM-1).
18. **(Cancelled)**
19. **(Currently Amended)** The method of claim 3, wherein said pair of epitope binding domains are connected by a flexible linker, ~~preferably by a polypeptide linker disposed between said domains, wherein said polypeptide linker comprises a plurality of hydrophilic amino acids of a length sufficient to span the distance between the C-terminal end of one of said domains and the N-terminal end of the other of said domains when said fusion protein assumes a conformation suitable for binding when disposed in aqueous solution.~~

20. **(Currently Amended)** ~~The method of claim 1, wherein the identification of said further comprising the binding site domain comprises the steps of:~~
 - ~~(b') removing said anchoring domain from said recombinant polypeptide;~~
 - ~~(b'') periplasmatically expressing the nucleic acid molecules encoding the remainder of said recombinant polypeptide in bacteria; and~~
 - (b''') verifying whether said epitope binding site domain binds to said predetermined epitope.
21. **(Currently Amended)** ~~KA~~ kit comprising:
 - (a) a panel of recombinant vectors encoding a panel of recombinant polypeptides comprised of: as defined in any one of claims 1 to 20; and/or
 - i. an N-terminal blocking domain at the N-terminus of said recombinant polypeptides;
 - ii. a C-terminal anchoring domain at the C-terminus of said recombinant polypeptides;
 - iii. at least one epitope binding domain positioned between said N-terminal blocking domain and said C-terminal anchoring domain; and
 - (b) a bacterial library transfected with a panel of vectors as defined in (a).
22. **(Currently Amended)** An isolated epitope binding site domain or recombinant polypeptide obtainable by the method of claim 1, wherein said epitope binding site domain or recombinant polypeptide comprises at least ~~one~~ three of the complementarity determining regions (CDR) of the scFv ~~fragment according to any one of from~~ SEQ ID Nos. 61, 63, 65, 67, 69, 71, 73, 75 and 77.
23. **(Currently Amended)** An isolated polypeptide or an antibody comprising at least one epitope binding site domain or fusion protein of according to claim 22.
24. **(Currently Amended)** ~~The~~ An isolated polypeptide or antibody of claim 23 ~~having~~ comprising at least one epitope binding domain selected from the group consisting

~~of the amino acid sequence according to any one of SEQ ID Nos.: 61, 63, 65, 67, 69, 71, 73, 75 and 77.~~

25. **(Currently Amended)** ~~An isolated P~~polynucleotides ~~which upon expression that encodes the a~~ polypeptide or antibody ~~of~~ according to claim 23 or 24.
26. **(Currently Amended)** A cell transfected with a polynucleotide ~~of~~ according to claim 25.
27. **(Original)** A process for the preparation of a polypeptide or antibody of claim 23 or 24 comprising cultivating a cell of claim 26 under conditions suitable for the expression of the polypeptide and isolating the polypeptide from the cell culture medium.
28. **(Currently Amended)** A pharmaceutical composition ~~containing~~ comprising a polypeptide or antibody ~~of~~ according to claim 23 or 24 ~~and optionally a pharmaceutically acceptable carrier.~~
29. **(Currently Amended)** A diagnostic composition comprising the polypeptide or antibody of claim 23 or 24 ~~and optionally suitable means for detection.~~
30. **(Currently Amended)** ~~An isolated epitope binding site-domain or recombinant polypeptide obtainable by the method of claim 1, wherein said epitope binding site-domain or recombinant polypeptide comprises at least one the three complementarity determining regions (CDR) of the scFv fragment according to~~ from SEQ ID No. 75.
31. **(Currently Amended)** ~~An isolated~~ polypeptide or ~~an~~ antibody comprising at least one epitope binding site-domain or recombinant polypeptide ~~of~~ according to claim 30.
32. **(Currently Amended)** ~~The~~ An isolated polypeptide or antibody ~~of claim 23, having comprising the amino acid sequence according to set forth in~~ SEQ ID No. 75.

33. **(Currently Amended)** The polypeptide of claim 32 ~~having comprising~~ the amino acid sequence ~~according to~~ set forth in SEQ ID No. 75.
34. **(Currently Amended)** An isolated polypeptide or an antibody comprising at least ~~one~~three of the complementarity binding regions (CDR)~~binding site domain or~~ recombinant polypeptide that ~~comprises any one of~~ from SEQ ID Nos. 61, 63, 65, 67, 69, 71, 73, 75 and 77.
35. **(Currently Amended)** An isolated polypeptide or an antibody comprising ~~at least one~~ the epitope binding site domain ~~or fusion protein that comprises~~ set forth in SEQ ID No. 75.
36. **(Previously Presented)** The method of claim 1, wherein said epitope binding domain is comprised of at least two domains selected from the group consisting of V_H and V_L.
37. **(Previously Presented)** The method of claim 19, wherein said polypeptide linker comprises a plurality of hydrophilic amino acids and allows for said epitope binding domains to assume a conformation suitable for binding epitope when disposed in aqueous solution.
38. **(New)** The method of claim 12, wherein said effector protein domain is capable of sequestering an ion or selective binding to a solid support.
39. **(New)** The pharmaceutical composition according to claim 28, further comprising a pharmaceutically acceptable carrier.
40. **(New)** The diagnostic composition according to claim 29, further comprising means for detection.
41. **(New)** The method of claim 1, wherein said recombinant polypeptides are bivalent or multivalent.

42. **(New)** The method of claim 2, wherein said polypeptide linker comprises a plurality of hydrophilic amino acids and connects the C-terminal end of said blocking domain and the N-terminal end of said epitope binding domain